

MEMORANDUM

To: Luke Chavez
US EPS Region 8
(via Email)

From: Mark Thiesse, Jim O'Connor and Kevin Frederick
WDEQ/Water Quality Division, Groundwater Section

Date: February 12, 2009

Subject: Sampling Plan for Pavillion, Wyoming

Luke, we are submitting comments on the above referenced sampling plan (Plan) via email due to the short turnaround time. We appreciate the opportunity to provide comments and look forward to working with the EPA and your contractors on this project. We have a couple of general comments on the Plan and the meeting planned for February 25th first, and more specific comments on the Plan later. We discussed most of these comments with Greg Oberley yesterday (2/11/09) during a phone call so please contact him or Mark for clarification on any of these comments.

General Comments

1. We feel there needs to be some discussion of the WDEQ's role, as well as the Tribe's role, both for the field work (in the Plan) and for the public meeting. The public may not be aware this is a cooperative effort brought on by public concerns to the State and the EPA. Therefore we ask that the Plan (and perhaps during the meeting) include some language to the effect that the "WDEQ is coordinating and cooperating with the investigation."
2. We are concerned that the report seems to focus on the Meeks residence as "ground zero" for the contamination. The Plan calls the Meek's residence as the "site" and the use of the ¼ mile circles around the Meek's seems to imply that is where all the contamination is located. Additionally the Plan includes the use of "Plume" in the title and throughout the plan. We have not identified a plume or even the suggestion of a plume in the area. We feel that the public will be concerned or it may cause worry by using "plume" when referring to this area. We ask instead to use a phrase such as "Pavillion Area GW Investigation" or even "area of interest" when discussing the areal extent of the investigation. Also, perhaps the map could just be drawn with a rectangle or even an irregular line around the area instead of the circles.
3. The Plan discusses sampling only 20 wells in the area. Our look at the State Engineer's database identified for domestic wells located within 1 mile of oil and gas activity turned up approximately 80 domestic wells. We are concerned that the Plan may be too limited by only sampling 20 wells.

4. The Plan does not discuss what will happen if contamination is found, or how the results will be shared with the community. Will there be another public meeting following the compilation of the data? Will there be a report generated? The cover letter to the residents does not mention how the data will be used or what the requirements are for reporting contaminated wells. For instance if someone has a leaking septic system and it has impacted groundwater in their well, or in their neighbor's well, will the residents know or understand that they have to report that to the WDEQ and they may be required to address the problem? We sure don't want to scare people away from participating in this project, but the data will be public information eventually, so they should understand the consequences of that.
5. We also suggest that URS or which ever contractor that you will be using to sample the wells are present at the public meeting. The residents will get to meet these folks, and the samplers will get a feel for the mood of the participants.

Specific Comments

6. Page 5, first paragraph, typo in last line – “mostly “due” to”
7. Page 5, second paragraph. The Cody Shale is discussed as a poor aquifer. Please note that it is a major aquifer in the Lander area and is used for domestic purposes in many homes.
8. Page 6, first line. The word Madison is missing in front of Limestone.
9. Page 7, Section 3.3.2. A diagram showing how surface casing and production casing relate to each other would be beneficial.
10. Page 8, first paragraph. The text states that “A private well is located... of the site...” This comment relates to #2 above. It is not clear where the “site” is. We do not believe that this language should be used as there has been no confirmation of oil and gas caused contamination.
11. Page 8, Section 4.1. The language in this section seems to relate to fracing fluids, but that was not made clear. The first paragraph talks about drilling fluids, but then fracing fluids are discussed without introduction.
12. Page 11, Section 4.2. This comment relates back to #2 above. The Plan discusses sampling wells within 4 miles of the Meeks residence. As well as not focusing on the Meeks, we believe that all domestic wells within one mile of any of the oil and gas wells in the Pavillion gas field may be at risk, or are at least worth investigating. If you need to limit the investigation area due to cost or other resource constraints, please provide more explanation as to why this area is being focused upon.
13. Page 11, second paragraph. Two water wells are discussed in this paragraph and it states that there is no conclusive analytical data for these wells. What does this refer to? Were these wells sampled and the data was suspect? Did you mean to say that there is no detailed analytical data available?

14. Page 12, Section 4.3, last paragraph. This discusses fish in Five Mile creek. Please note that burbot (also known as ling) is highly prized by some folks as “like lobster” and is a very sought after game fish.
15. Table 5 and Section 6.5 discuss sampling of wells. The Town of Pavillion well is suggested to be sampled as a “background” well. Please make sure that well is completed in the same formation(s) as the wells in the target area.
16. We suggest that basic hydrogeologic parameters be measured if at all possible. For instance, groundwater elevations for the creation of potentiometric maps would be very valuable.
17. Page 19, Section 6.5.2. Please ensure that the analytical suite includes dissolved methane gas (at the least) and also slime, iron and sulfate bacteria. The bacteria are the only “contaminants” that have been identified in the Meeks well to date.
18. Page 20, third bullet. Should that paragraph say “trip” instead of “triple”?